Amendments to the Claims:

The following listing of claims will replace all previous versions and listings of claims.

1-20 (canceled)

21. (new) A valve assembly comprising:

a pump chamber having a first recess formed therein;

a pump head having a second recess formed therein cooperating with the first recess to define a valve compartment, an annular valve seat extending into the valve compartment, and an opposing side of the valve compartment opposite the annular valve seat; and

an apertureless flexible valve element positioned in the valve compartment and comprising:

a generally circular central portion that is movable between the annular valve seat and the opposing side of the valve compartment;

a pair of end tabs that are diametrically opposed to each other with respect to the generally circular central portion and that are trapped between the pump chamber and the pump head; and

a pair of diametrically opposed necked down portions by which the end tabs are attached to the central portion;

the flexible valve element having a flat closed configuration in which a first side of the central portion contacts the annular valve seat and a centrally-flexed open configuration in which a second side of the central portion contacts the opposing side of the valve compartment.

22. (new) A valve assembly according to claim 21, wherein at least one valve compartment outlet hole is formed in the opposing side of the valve compartment, the outlet hole being positioned off center with respect to the generally circular central portion of the flexible valve element.

23. (new) A valve assembly according to claim 21, wherein two valve compartment outlet holes are formed in the opposing side of the valve compartment diametrically opposing each other with respect to the generally circular central portion of the flexible valve element.

24. (new) A valve assembly according to claim 23, wherein:

the end tabs of the flexible valve element are positioned on a first diametrical axis of the generally circular central portion of the flexible valve element;

the two valve compartment outlet holes are formed on a second diametrical axis with respect to the central portion; and

the first diametrical axis is perpendicular to the second diametrical axis.

25. (new) A valve assembly according to claim 21, wherein the flexible valve element has a uniform thickness, and wherein the central portion of the flexible valve element is movable between the open configuration and the closed configuration by a distance of less than 1.6 times the thickness.

26. (new) A valve assembly according to claim 21, wherein the flexible valve element has a uniform thickness, and wherein the central portion of the flexible valve element is movable between the open configuration and the closed configuration by a distance of less than 0.93 times the thickness.

27. (new) A valve assembly according to claim 21, wherein the flexible valve element has a uniform thickness, and wherein the central portion of the flexible valve element is movable between the open configuration and the closed configuration by a distance of less than the thickness.

28. (new) A valve assembly according to claim 21, wherein the first valve element comprises at least one elastomeric material selected from the group consisting of ethylene propylene diene terpolymer, a fluoroelastomer, a perfluoroelastomer, and silicone.

29. (new) A valve assembly according to claim 21 wherein the first valve element has a hardness between 40 and 90 Durometer, shore A.

30. (new) A valve assembly according to claim 21, wherein the annular valve seat extends from the pump head, wherein the opposing side of the valve compartment is defined by the pump chamber, and wherein the valve assembly further comprises:

a pump chamber having a third recess formed therein;

a pump head having a fourth recess formed therein, the fourth recess cooperating with the third recess to define a second valve compartment;

a second annular valve seat extending from the pump chamber and into the second valve compartment; and

a second flexible valve element positioned in the second valve compartment, the second flexible valve element comprising:

a generally circular central portion that is movable between the second annular valve seat and the pump head;

a pair of end tabs that are diametrically opposed to each other with respect to the generally circular central portion and that are trapped between the pump chamber and the pump head; and

a pair of diametrically opposed necked down portions by which the end tabs are attached to the central portion;

the flexible valve element having a flat closed configuration in which a first side of the central portion contacts the annular valve seat and a centrally-flexed open configuration in which a second side of the central portion contacts the pump head.

31. (new) A valve assembly according to claim 21, wherein:

the first recess has a generally circular central portion in which the central portion of the flexible valve element is movable, and a pair of rectangular portions, which are diametrically opposed to each other with respect to the generally circular central portion and within which the end tabs of the flexible valve element are trapped;

the central portion of the first recess is deeper than the rectangular portions of the first recess;

the second recess has a generally circular central portion aligned with the central portion of the first recess, and a pair of diametrically opposed rectangular portions aligned with the rectangular portions of the first recess;

the central portion of the second recess is deeper than the rectangular portions of the second recess; and

the annular valve seat is centrally located in the central portion of the second recess.

32. (new) A valve assembly according to claim 31, wherein two valve compartment outlet holes formed in the generally circular central portion of the first recess diametrically oppose each other on an axis perpendicular to an axis on which the rectangular portions of the first recess oppose each other.